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ABSTRACT

This evaluation attempts to measure the extent and effectiveness of ESEA Title I programs designed to meet the needs of disadvantaged children and apprizes the public and the legislature of program outcomes. In keeping with USOE requirements for evaluating Title I programs, this document is constructed of (1) responses to USOE probes by questionnaire sequence, (2) applicable supplementary or background information, and (3) available related findings. Data were collected from interviews with selected personnel from the Michigan State Department of Education; reaction reports from teachers, administrators, State ESEA Title I personnel, and university personnel; onsite visitations by Title I staff and university consultants; and evaluation supplement and narrative reports distributed to local educational agency Title I directors and activity directors. (EA)

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ANNUAL EVALUATION REPORT OF

PROGRAMS FUNDED UNDER P.L. 89-10, TITLE I

IN MICHIGAN

Prepared by

Program Evaluation Services Unit
Bureau of Research, Evaluation, and Assessment
Michigan Department of Education
Lansing

November 13, 1970

EA 003 711

This report represents the summary evaluation of programs funded under Title I, P. L. 89-10, for the fiscal year 1970. The report utilizes the format provided by the United States Office of Education (U.S.O.E.). The specific U.S.O.E. questions and instructions appear as underlined sub-headings. The responses follow each question. Responses were obtained from two sources: (1) the State Department of Education's Title I Unit; and (2) a questionnaire prepared by the State Department of Education's Bureau of Research, Evaluation, and Assessment and completed by local program administrators.

Some local education agencies were unable to complete their evaluative and descriptive questionnaire in time for inclusion in this report. However, 496 (98%) of the 506 projects are included.

1. Provide the following basic State statistics:

   A. Total number of operating LEA's in the State

   B. Number of LEA's participating in Title I
      (1) during the regular school term only
      (2) during the summer term only
      (3) during both the regular school term and the summer term

   C. Number of Title I programs

   D. Unduplicated number of pupils who participated in Title I programs
      (1) enrolled in public schools
      (2) enrolled in nonpublic schools

Basic State statistics are provided in Tables 1-1 and 1-2.

TABLE 1-1

MICHIGAN LOCAL EDUCATION AGENCIES

Total Number of Operating LEA's in Michigan (Sept. 1969)	644
Number of Michigan LEA's participating in Title I:	
(1) during the regular school term only	153*
(2) during the summer term only	96*
(3) during both the regular school term and summer term	256*
(4) total LEA's participating in Title I	505

* Based on 98% return

NOTE: 506 Title I projects were in Operation in 505 LEA's.

TABLE 1-2

UNDUPLICATED NUMBER OF PUPILS WHO PARTICIPATED IN TITLE I PROGRAMS IN MICHIGAN DURING FY 1970

Public*	Nonpublic*	Institutions*	Total*
102,167	8,539	796	111,502

* Estimate based on 98% return.

2. During FY 1970, indicate the number of SEA Title I staff visits to LEA's participating in Title I. By objective of visit (planning, program development, program operation, evaluation, etc.), specify the purposes of these visits and their effect on the development, operation, and evaluation of local projects. Indicate proportion of visits, by type.

We asked this question of the State Department of Education's Title I Unit. It answered as follows:

> During fiscal year 1970 the Title I staff of the Michigan Department of Education made a total of 605 visits to local education agencies. These visits are broken down as follows:
>
> Program Planning - 165 (27%)
>
> Program Development - 151 (25%)
>
> Program Operation - 205 (34%)
>
> Program Evaluation - 84 (14%)

3. Describe any changes your agency has made in the last three years in its procedures and the effect of such changes to:

   A. Improve the quality of Title I projects

   B. Insure proper participation of nonpublic school children

   C. Modify local projects in the light of State and local evaluation

We asked this question of the State Department of Education's Title I Unit. It answered as follows:

> A. The Michigan Department of Education has attempted to improve the quality of Title I projects through on-site visitations by teams composed of consultants from Title III, Adult Basic Education, the Curriculum Division and the Finance Division, as well as Title I consultants. Written and oral reports are given to the LEA's with recommendations for improvement.
>
> Regional meetings have been conducted to acquaint LEA's with recent amendments to Title I, to assist LEA personnel in the writing of behavioral objectives that can be measured, and for sharing information on promising compensatory education programs.

Statewide compensatory education conferences have been held the past two years to disseminate information on selected projects, to discuss ways of improving the quality of compensatory education, to acquaint personnel with materials and technology, and to stimulate interest in better programming. Attendance at the last conference surpassed 2,000.

B. Meetings have been held with the Michigan Association of Nonpublic schools to discuss rules and regulations concerning their participation. The following questions have been included in the narrative description of the application for the purpose of insuring the genuine participation of nonpublic school children in Title I programs.

"13. Other Nonpublic Information
   a. Briefly describe the extent to which nonpublic school officials participated in the planning of this project.
   b. Did nonpublic school officials
      (1) Help identify eligible children?
      (2) Contribute to need assessment?
      (3) Suggest means to meet needs?
      (4) Help with plans to coordinate this project with regular programs?
   c. Briefly describe the needs of nonpublic school children as determined by the comprehensive assessment.
   d. What is the name(s), title(s), and address(es) of the nonpublic school representative(s)?"

C. In the past year, the Michigan Department of Education initiated meetings with evaluators of local Title I projects from thirteen of Michigan's largest LEA's. The primary purpose was to explore ways to better assess the impact of Title I in their LEA's. The local evaluators are continuing these efforts.

The SEA is presently engaged in conducting a study with Educational Testing Service of Princeton, New Jersey. This study is directed at assessing the impact of Title I services on third graders in twenty-two of the larger LEA's. The LEA's were chosen on the basis of having one of their primary objectives aimed at improving reading achievement for third grade participants.

4. Effect upon Educational Achievement

A. What effect, if any, has Title I had upon the educational achievement of educationally deprived children including those children enrolled in nonpublic schools in your State? On the basis of objective Statewide evidence -- not testimonials or examples but hard data -- describe the impact on reading achievement levels of educationally deprived pupils, including nonpublic school pupils. With standardized achievement test results, compare the achievement of participants in Title I projects to that of all pupils of the same grade level in the State using current national and statewide norms and specifying the norms used. All evidence should be based on the educational performance of a significant number of Title I participants for which data are presented.

B. What are the common characteristics of those Title I projects in your State that are most effective in improving educational achievement?

C. What evidence, if any, have you found in your State that the effectiveness of Title I projects is related to cost?

A. The first part of the fourth question is answered in Tables 4-1 through 4-15 (see Appendix A). Pre- and post test scores were reported in grade equivalent units for 12,130 students in grades 1-8. However, these tables show pre- and post test grade equivalent scores on the most frequently used achievement tests; consequently, scores for only 9,793 students in grades 1-8 are reported.

Due to certain limitations of the data presented, caution should be exercised in drawing conclusions and making generalizations as to the effectiveness or lack thereof of Title I programs in Michigan. The most obvious limitation is the lack of representativeness of the data. It must be clearly understood that these scores are not

derived from a random sample. Therefore, generalizations to the entire Title I population in Michigan are unwarranted. However, for the children who are represented in these tables, the following general conditions may be noted:

1. On the average, participating children were below the test publishers' grade norms when they completed pre-tests.
2. Generally, participating children were closer to the test publishers' grade norms when they completed post tests. However, the children were still generally, below the grade norms.
3. It may additionally be noted that children who participated in the programs in the later grades were farther below grade level than children in the lower grades. However, it is not known if these children had participated previously in Title I programs.

B. No common characteristics have been found in FY 1970 projects that are most effective in improvement of educational achievement. There is some small evidence from Tables 4-1 through 4-15 which demonstrates that children participating in summer programs may be making relatively greater gains than children participating in programs conducted during the regular school year only or in programs conducted during both the regular school year and the summer term.

C. No evidence has been found in Michigan which shows that effectiveness of Title I projects is related to cost.

5. What effect, if any, has the Title I program had on the administrative structure and educational practices of your State Education Agency, Local Education Agencies, and nonpublic schools?

We asked this question of the State Department of Education's Title I Unit. It answered as follows:

> No major changes have occurred in the organization of the Compensatory Education Section during the past year. The Appraisal Unit continues with the same staff of a compensatory education director, a Title I coordinator, eight consultants, and six clerical personnel. The Migrant Unit is made up of one administrator, three consultants, and two clerical personnel. In addition, one consultant of the Bureau of Research, Evaluation, and Assessment is assigned to Title I for evaluative and research purposes. Financial affairs are handled by a Grants Unit Supervisor and on a part-time basis by two additional finance executives.
>
> With the emphasis on accountability, there has come about efforts by the SEA to assess Title I activities. Developing interest in guaranteed performance contracting has resulted in a number of school districts studying, and in some instances, contracting with independent concerns for the education of disadvantaged children.
>
> Local school districts continue employing special people to provide direction for Title I programs and have added evaluation personnel to their staffs. As a result of visitations by the SEA personnel, school districts are further concentrating their efforts on smaller numbers of the disadvantaged children and are giving more attention to evaluation, with specific emphasis on academic achievement. The SEA has changed assignments of consultants so that more time is spent in consultation with Wayne County and Detroit.
>
> Steps have been taken by the SEA to implement the concept of comparability. Numerous meetings have been held which have included SEA personnel, intermediate personnel, and local school district personnel to develop a comprehensive plan to assess comparability in local education agencies.

Local school districts have made efforts to continue and improve cooperation between public and nonpublic schools in the provision of services to the disadvantaged.

In addition, LEA's were asked to describe the impact of their Title I projects on the administrative structure and the educational practices of their school system. The responses are shown in Tables 5-1 and 5-2.

TABLE 5-1

IMPACT ON TITLE I PROJECTS ON ADMINISTRATIVE STRUCTURE OF LOCAL EDUCATION AGENCIES

	Percent	Number of Projects
1. The Title I project had no significant impact on the administration or administrative structure of the school district.	49	242
2. The Title I project overburdened our present administrative staff; however, we made no change in staffing or structure because of it.	24	120
3. The Title I project overburdened our administrative staff; therefore, we added to our administrative structure.	17	83
4. Other.	10	50
TOTAL	100	495

6. Additional Efforts to Help the Disadvantaged

A. If State funds have been used to augment Title I programs, describe the number of projects, objectives of the programs, rationale for increased funding with State money, and the amount and proportion of total program funds provided by the State for the 1969-70 school year. Indicate the number of projects, number of participants, objectives of the programs, and the level of funding for the 1969-70 school year. Provide data separately for all compensatory education programs if any, supported entirely by State funds which are operated specifically for the educationally deprived.

TABLE 5-2

EFFECTS OF TITLE I PROJECTS ON THE EDUCATIONAL PRACTICES OF LOCAL EDUCATION AGENCIES

	Percent*	Number of Projects
1. Title I has had no significant effect on the educational practices of the district.	**	4
2. There is more attention to individualized educational procedure as a result of Title I.	91	452
3. There has been an increased awareness on the part of our staff to the needs of disadvantaged children as a result of Title I.	94	468
4. There has been better school-community communication and cooperation as a result of Title I.	73	364
5. There has been better communication and cooperation between public and nonpublic schools in the district as a result of Title I.	37	185
6. There has been better communication and cooperation with non-school social agencies in the district as a result of Title I.	50	248
7. There has been greater emphasis on basic skills -- particularly reading and math as a result of Title I.	79	391
8. Other.	19	96

* Percent of 496 reporting projects
** Less than one percent

B. Provide descriptions of outstanding examples of the coordination of Title I activities with those of other federally funded programs. Identify the other programs and agencies involved.

We asked this question of the State Department of Education's Title I Unit. It answered as follows:

A. The State of Michigan implemented a compensatory education program under the provisions of Section Three of the State Aid Act in July, 1968. The first year's funding was six million dollars. The funding of Section Three was increased to 9.6 million dollars for the 1969-70 school year. Section Three funds are allocated to individual schools having a high percentage of students with socioeconomic deprivation. All approved programs must contain provisions for lowering the pupil-adult classroom ratio, and provisions for staff inservice training. The basic objective of all Section Three programs is to raise the achievement level in basic skills for pupils. 119 schools and 40,893 pupils participated in Section Three programs in the 1969-70 school year.

Remedial reading programs are funded under the provisions of Section 12 of the State School Aid Act. 354 school districts operated programs under the provision of Section 12 in the 1969-70 school year. Approximately 1,425 teachers and 71,000 pupils participated in Section 12 remedial reading programs in 1969-70.

B. Some examples of coordination of Title I activities with other programs are as follows:

(1) The Detroit Career Opportunity Project was supplemented by Title I funds. Personnel in target schools received the benefit of this cooperative effort.

(2) The Wayne County E.P.D.A. Programs provided training to target school personnel in order that local districts might have trainers of paraprofessionals.

(3) The Westwood School District's Preschool Project is jointly funded by Title I and O.E.O.

(4) Benton Harbor operated a Health Project that relies upon the funding and cooperation of many agencies; i.e., O.E.O., Title I, Social Security, etc.

(5) One of the SEA Title I consultants has worked with Follow-Through programs as well as with Title I. This has led to greater emphasis on early childhood programs in Title I.

7. Evaluate the success of Title I in bringing compensatory education to children enrolled in nonpublic schools. Include in your evaluation such factors as the number of projects, the quality of projects, the time of the day and/or year when projects are offered, the adaptions to meet the specific educational needs of educationally deprived children in nonpublic schools, changes in legal interpretations, and joint planning with nonpublic school officials.

We asked this question of the State Department of Education's Title I Unit. It answered as follows:

> The quality of projects offered to the nonpublic schools improved due to the fact that an annual analysis of needs was made in each building either by the public or nonpublic school or on a cooperative basis. As the results of an analysis were studied, activities and services were planned to meet the needs. No longer were services based on the needs in the public school which dictated the type of personnel to be employed for service in the public and nonpublic schools.
>
> Projects were offered in the nonpublic schools during the regular school term when the children were in their daily classes. In districts where community school evening projects were in effect, the nonpublic school children were able to participate. During summer term projects, the nonpublic school children participated in activities and services in the public schools. No distinction was made in the groupings.
>
> In districts that had space problems, the public schools arranged to have Title I services in the nonpublic schools. The nonpublic schools made an effort to provide the best possible facilities for the Title I activities. The public school personnel were able to adapt to a different situation and no adverse comments were received concerning cooperation between schools when problems of this type arose in the districts.
>
> The nonpublic schools became aware of the fact that Title I was to be administered by the public schools and that control of equipment especially and personnel was legally a duty of the public schools. Less disagreement was in evidence over the amount of services to be rendered to the nonpublic school children.
>
> Items two and three of the Title I Program Guide #44 gave direction to joint planning in the school districts. This direction plus the consultants' intervention and assistance increased the

number of districts doing joint planning with nonpublic school officials.

There were 213 (43%) of the 496 reporting Title I projects which had both public and nonpublic school children participants.

TABLE 7-1

COMPARISON OF PROGRAMS HAVING BOTH PUBLIC AND NONPUBLIC SCHOOL PARTICIPANTS WITH PROGRAMS HAVING ONLY PUBLIC SCHOOL PARTICIPANTS

	Projects Having Both Public and Nonpublic School Participants	Projects Having Only Public School Participants	Total
Number of Projects	213 (43%)	283 (57%)	496 (100%)
When Project was Operative:			
Regular School Year Only	40 (19%)	111 (40%)	
Summer School Only	37 (17%)	57 (20%)	
Both Regular and Summer Terms	136 (64%)	115 (40%)	
	213 (100%)	283 (100%)	

8. How many LEA's conducted coordinated teacher-teacher aide training programs for education aides and the professional staff members they assist? What was the total number of participants in each project? Describe the general patterns of activities and provide specific examples of joint training programs.

Local education agencies were asked to describe the general patterns of activities conducted in joint training programs for education aides and

professional staff members. A total of 5,094 teachers and 3,528 teacher aides were involved in joint training activities. Training activities were conducted in 309 projects. Data for the reporting projects are displayed in Table 8-1.

TABLE 8-1

ACTIVITIES CONDUCTED IN JOINT TRAINING PROGRAMS
FOR TEACHERS AND TEACHER AIDES

Activity	Number of Projects Reporting Activity	Percent of Total Reporting Projects (496)
1. Joint Meeting or Discussion	274	55%
2. Joint Training "Workshop" with Presentation by Staff	195	39%
3. Joint Training "Workshop" with Outside Consultant	149	30%
4. Other	54	11%

NOTE: Many projects reported more than one activity.

A description of outstanding joint training programs was requested from the State Department of Education's Title I Unit. It responded as follows:

> Two examples of outstanding joint training programs for teacher aides and the professional staff members they assist are to be found in the School District of the City of Saginaw and the Jackson Public Schools. These programs share many common and exceptional features.
>
> In both cases, the Title I training component is effectively coordinated with other federal and state categorical aid programs which also require inservice training components either under Title III, E.P.D.A., Head Start, or Section 12 and Section Three of the Michigan State Aid Act. An important

feature of both training programs is the assignment of a central administrator responsible for the conduct and administration of the district's overall inservice training effort.

In Saginaw, the training program is to be geared to a district-wide concept of an Educational Career Ladder Program which is to include a career curriculum for secondary school students, and a professional career ladder for school personnel. Saginaw also provides a career lattice for clerical assistants, teacher aides, home-visitors, safety patrol aides, extra-curricular aides, and administrative assistants. Jackson also provides a career lattice with appropriate incentives.

It is rountine practice in both districts to involve aides, teachers, and other professional personnel in all aspects of the training program. Inservice training classes may have aides and teachers as students. A multi-phased approach also provides considerable on-the-job training sessions for both the professional and paraprofessional. Every effort is made to extend the team approach to instruction. Many informal building sessions are provided so team members may share their mutual concerns and problems, learn from each other, and enhance the learning opportunities of their students.

Experts in all areas of education are invited to participate in the districts' training programs. University personnel provide support and assist in evaluation of the programs. Each district also utilizes its own professional resources to augment program offerings. Paraprofessionals are provided opportunities to participate in general curriculum meetings, building staff meetings, PTA meetings, parent-teacher conferences, and other functions which afford an occasion for learning the business of education and becoming an integral part of the school districts' education team.

9. Describe the nature and extent of community and parent involvement in Title I programs in your State. Include outstanding examples of parent and community involvement in Title I projects.

Local education agencies were asked to indicate the number of parents and other community persons who participated without pay in Title I projects. Table 9-1 displays the responses of the 496 reporting projects. A total of

429 projects reported participation by parents, while 343 projects reported participation by other community people.

TABLE 9-1

CITIZEN PARTICIPATION

	Parents	Other Community People
1. Planning	5,373	2,336
2. Evaluation	8,842	1,395
3. Teacher Aides	1,415	1,119
4. Playground, Lunch, etc., Supervision	1,213	563
5. Receiving Instruction	4,702	1,178
6. Other	1,466	1,008

Specific examples of outstanding parent and community involvement were requested from the State Department of Education's Title I Unit. It responded as follows:

> Two specific examples of outstanding community and parent involvement programs are to be found in the School District of the City of Pontiac and in the Flint Community Schools.
>
> Pontiac involves parents in the planning of Title I projects, employs them as teacher aides, uses them as volunteers in the program activities, and to disseminate information about the program to the community. Each target school has a parent advisory group which meets monthly. There are two members from each target area advisory group who serve on an area-wide advisory committee which meets monthly to discuss the Title I program and serve in an advisory capacity. The area-wide advisory committee works with local school district personnel in reviewing, planning, and evaluating the Title I programs.
>
> In the Flint Title I project, parents were involved in the planning of the program and participated in many school and school-related activities which form the basis of the Community-School philosophy. Comments and insights of these parents reinforce the goal and objectives of the Title I project.

The Flint Community Schools were instrumental in organizing a county-wide inservice training, dissemination, and parental involvement conference, the first of its kind in Michigan.

Appendix A

Effect of Title I On Educational Achievement

I. Meaning of Tables 4-1 through 4-15

Tables 4-1 through 4-15 present data for 9,793 students who participated in Title I programs. The data are presented in fifteen separate tables because scores from different achievement tests can not be aggregated. Each table shows the number of projects reporting pre- and post test scores for pupils on a particular achievement test and the number of pupils who took pre- and post tests by grade level. In addition the mean number of months and the mean number of hours between pre- and post test is shown on a per pupil basis.

Tables 4-1 through 4-5 show data for 6,304 students who participated in projects held during both the regular school year and the summer term. Tables 4-6 to 4-10 present data for 2,831 students who participated in projects during the regular school year only. Tables 4-11 to 4-15 present data for 1,194 students who participated in projects held during the summer term only.

These tables are significant because the last three columns present data which show how close to grade level students were at the time of the pre-test and at the time of the post test, and therefore, show the relative gain or loss per pupil in relation to expected gains.

II. How to Read Tables 4-1 through 4-15

For illustrative purposes Table 4-1 may be used to demonstrate the proper way to read these tables.

Using grade four as the example, the table should be read as follows: Thirty-three projects reported administering pre- and post Mac Ginitie Achievement tests to Title I children during projects held during the regular school term and the summer term. Scores for 406 children were reported. Students spent, on the average, 154 hours in Title I treatment over a period of 7.4 months between the administration of pre- and post tests. On the average, students who took this test were 1.47 grade equivalent units[1] behind grade norm on the pre-test and 1.42 behind on the post test. The final column is the difference between -1.47 and -1.42. This indicates the mean grade equivalent gain per pupil in relation to expected gains. In other words, on the average, these students were .05 grade equivalent units closer to expected grade level after treatment than they were prior to treatment.

The bottom row of data in each table represents the average for all pupils taking the test.

III. Limits of the Data Presented

Caution should be exercised in drawing conclusions or making generalizations as to the effectiveness of Title I programs in Michigan from the data in these Tables. The most obvious limitation of the data is its lack of representativeness. It must be clearly understood that these data are not derived from a random sample. Therefore, generalizations to the entire Michigan Title I population are unwarranted.

Furthermore, in using so-called "normed" or standardized tests, one must be aware of potentially spurious results due to possible regression to the mean by students. Conceivably, averaging could serve to raise the

---

[1] The grade equivalent of any given test score is the grade level for which that score is the median score for pupils at that grade level. For example, if a pupil makes a score of 36, and 36 is the median score made by children tested at the seventh month of the fourth grade, he is said to have a grade equivalent score of 4.7.

scores for low achieving pupils as an artifact of regression toward the mean score in those cases where pre-test scores were used to select students for treatment.

IV. Summary of Results

With the foregoing cautions in mind, the following general conditions may be noted for the students herein reported:

1. On the average, participating children were below the test publishers' grade norms when they completed pre-tests.
2. Generally, participating children were closer to the test publishers' grade norms when they completed post tests. However, the children were still generally, below the grade norms.
3. It may additionally be noted that children who participated in the programs in the later grades were farther below grade level than children in the lower grades. However, it is not known if these children had participated previously in Title I programs.

TABLE 4-1

GRADE EQUIVALENT GAINS AND LOSSES IN RELATION TO EXPECTED GAINS FOR CHILDREN TAKING PRE- AND POST MAC GINITIE ACHIEVEMENT TESTS DURING PROJECTS HELD DURING REGULAR YEAR AND SUMMER, 1969-70

Assigned Grade	Number of Projects	Number of Pupils in Projects	Mean Months in Project Per Pupil	Mean Hours Treatment Per Pupil	Mean Grade Equivalent From Assigned Grade Norm		Mean Grade Equivalent Gain or Loss Per Pupil in Relation to Expected Gain
					Pre-test	Post test	
1	6	151	5.1	53	-0.04	0.00	+0.04
2	34	629	7.2	117	-0.57	-0.47	+0.10
3	41	795	7.2	108	-0.76	-0.96	-0.20
4	33	406	7.4	154	-1.47	-1.42	+0.05
5	29	325	7.6	129	-1.58	-1.48	+0.10
6	23	273	7.5	137	-2.09	-2.04	+0.05
7	6	98	8.2	130	-2.76	-2.43	+0.33
8	6	57	8.3	98	-3.69	-3.44	+0.25
Totals	--	2734	--	--	--	--	--
Average All Children			7.3	120	-1.15	-1.14	+0.01

TABLE 4-2

GRADE EQUIVALENT GAINS AND LOSSES IN RELATION TO EXPECTED GAINS FOR CHILDREN TAKING PRE- AND POST STANFORD ACHIEVEMENT TESTS DURING PROJECTS HELD DURING REGULAR YEAR AND SUMMER, 1969-70

Assigned Grade	Number of Projects	Number of Pupils in Projects	Mean Months in Project Per Pupil	Mean Hours Treatment Per Pupil	Mean Grade Equivalent From Assigned Grade Norm		Mean Grade Equivalent Gain or Loss Per Pupil in Relation to Expected Gain
					Pre-test	Post test	
1	11	209	9.3	110	-0.27	-0.22	+0.05
2	22	412	4.4	114	-0.93	-0.74	+0.19
3	21	369	5.0	72	-1.30	-1.12	+0.18
4	20	389	7.0	100	-1.58	-1.56	+0.02
5	20	330	7.3	90	-1.77	-1.72	+0.05
6	16	202	8.1	101	-2.28	-2.19	+0.09
7	8	33	8.2	87	-2.55	-1.60	+0.95
8	7	55	10.1	97	-3.01	-2.66	+0.35
Totals	--	1999	--	--	--	--	--
Average All Children			6.6	97	-1.41	-1.29	+0.12

TABLE 4-3

GRADE EQUIVALENT GAINS AND LOSSES IN RELATION TO EXPECTED GAINS FOR CHILDREN TAKING PRE- AND POST CALIFORNIA ACHIEVEMENT TESTS DURING PROJECTS HELD DURING REGULAR YEAR AND SUMMER, 1969-70

Assigned Grade	Number of Projects	Number of Pupils in Projects	Mean Months in Project Per Pupil	Mean Hours Treatment Per Pupil	Mean Grade Equivalent From Assigned Grade Norm		Mean Grade Equivalent Gain or Loss Per Pupil in Relation to Expected Gain
					Pre-test	Post test	
1	3	41	5.3	58	-0.22	-0.22	0.00
2	8	160	7.7	94	-0.44	-0.43	+0.01
3	7	146	7.7	90	-0.67	-0.61	+0.06
4	7	147	8.2	61	-0.86	-0.81	+0.05
5	7	138	7.9	102	-0.81	-0.82	-0.01
6	6	90	8.7	76	-1.32	-1.31	+0.01
7	8	100	8.9	122	-1.69	-1.79	-0.10
8	4	58	8.2	105	-1.85	-2.05	-0.20
Totals	--	880	--	--	--	--	--
Average All Children			8.0	89	-0.92	-0.93	-0.01

TABLE 4-4

GRADE EQUIVALENT GAINS AND LOSSES IN RELATION TO EXPECTED GAINS FOR CHILDREN TAKING PRE- AND POST METROPOLITAN ACHIEVEMENT TESTS DURING PROJECTS HELD DURING REGULAR YEAR AND SUMMER, 1969-70

Assigned Grade	Number of Projects	Number of Pupils in Projects	Mean Months in Project Per Pupil	Mean Hours Treatment Per Pupil	Mean Grade Equivalent From Assigned Grade Norm		Mean Grade Equivalent Gain or Loss Per Pupil in Relation to Expected Gain
					Pre-test	Post test	
1	4	41	4.3	71	-0.15	-0.07	+0.08
2	9	140	5.1	111	-0.56	-0.44	+0.12
3	10	135	5.0	130	-0.88	-0.71	+0.17
4	7	64	4.8	64	-1.26	-1.08	+0.18
5	3	19	4.4	53	-2.01	-1.64	+0.37
6	2	16	6.9	77	-2.58	-2.34	+0.24
7	--	--	--	--	--	--	--
8	--	--	--	--	--	--	--
Totals	--	415	--	--	--	--	--
Average All Children			5.0	102	-0.88	-0.72	+0.16

TABLE 4-5

GRADE EQUIVALENT GAINS AND LOSSES IN RELATION TO EXPECTED GAINS FOR CHILDREN TAKING PRE- AND POST IOWA ACHIEVEMENT TESTS DURING PROJECTS HELD DURING REGULAR YEAR AND SUMMER, 1969-70

Assigned Grade	Number of Projects	Number of Pupils in Projects	Mean Months in Project Per Pupil	Mean Hours Treatment Per Pupil	Mean Grade Equivalent From Assigned Grade Norm		Mean Grade Equivalent Gain or Loss Per Pupil in Relation to Expected Gain
					Pre-test	Post test	
1	--	--	--	--	--	--	--
2	--	--	--	--	--	--	--
3	3	41	7.3	53	+0.14	+0.15	+0.01
4	4	56	6.4	100	-0.65	-0.64	+0.01
5	4	56	6.8	119	-0.64	-0.61	+0.03
6	4	61	7.2	201	-0.36	-0.53	-0.17
7	4	42	7.5	115	-1.29	-1.12	+0.17
8	1	20	7.0	35	+1.10	+1.10	0.00
Totals	--	276	--	--	--	--	--
Average All Children			7.0	117	-0.44	-0.44	0.00

TABLE 4-6

GRADE EQUIVALENT GAINS AND LOSSES IN RELATION TO EXPECTED GAINS FOR CHILDREN TAKING PRE- AND POST MAC GINITIE ACHIEVEMENT TESTS DURING REGULAR SCHOOL YEAR PROJECTS, 1969-70

Assigned Grade	Number of Projects	Number of Pupils in Projects	Mean Months in Project Per Pupil	Mean Hours Treatment Per Pupil	Mean Grade Equivalent From Assigned Grade Norm		Mean Grade Equivalent Gain or Loss Per Pupil in Relation to Expected Gain
					Pre-test	Post test	
1	1	3	3.0	--	0.00	-0.30	-0.30
2	17	288	7.1	130	-0.78	-0.54	+0.24
3	26	338	7.7	158	-1.13	-0.94	+0.19
4	22	298	7.5	150	-1.22	-1.02	+0.20
5	18	191	7	133	-1.66	-1.45	+0.21
6	11	87	7.5	124	-1.75	-1.37	+0.38
7	7	40	7.6	348	-1.65	-1.05	+0.60
8	5	31	7.0	549	-1.58	-1.44	+0.14
Totals	--	1306	--	--	--	--	--
Average All Children			7.3	156	-1.19	-0.97	+0.22

TABLE 4-7

GRADE EQUIVALENT GAINS AND LOSSES IN RELATION TO
EXPECTED GAINS FOR CHILDREN TAKING PRE- AND POST
STANFORD ACHIEVEMENT TESTS DURING REGULAR SCHOOL YEAR PROJECTS, 1969-70

Assigned Grade	Number of Projects	Number of Pupils in Projects	Mean Months in Project Per Pupil	Mean Hours Treatment Per Pupil	Mean Grade Equivalent From Assigned Grade Norm		Mean Grade Equivalent Gain or Loss Per Pupil in Relation to Expected Gain
					Pre-test	Post test	
1	1	7	7.0	165	-0.70	+0.10	+0.80
2	6	35	9.6	642	-0.30	-0.42	-0.12
3	9	171	8.7	732	-1.07	-1.23	-0.16
4	7	79	8.8	269	-1.39	-1.33	+0.06
5	3	52	9.1	258	-2.19	-1.83	+0.36
6	6	52	8.1	469	-1.64	-1.39	+0.25
7	--	--	--	--	--	--	--
8	--	--	--	--	--	--	--
Totals	--	396	--	--	--	--	--
Average All Children			8.7	525	-1.28	-1.25	+0.03

TABLE 4-8

GRADE EQUIVALENT GAINS AND LOSSES IN RELATION TO EXPECTED GAINS FOR CHILDREN TAKING PRE- AND POST CALIFORNIA ACHIEVEMENT TESTS DURING REGULAR SCHOOL YEAR PROJECTS, 1969-70

Assigned Grade	Number of Projects	Number of Pupils in Projects	Mean Months in Project Per Pupil	Mean Hours Treatment Per Pupil	Mean Grade Equivalent From Assigned Grade Norm		Mean Grade Equivalent Gain or Loss Per Pupil in Relation to Expected Gain
					Pre-test	Post test	
1	--	--	--	--	--	--	--
2	3	48	8.0	100	-0.60	-0.16	+0.44
3	3	54	9.7	113	-0.87	-0.35	+0.52
4	4	47	6.5	93	-0.90	-0.88	+0.02
5	3	50	8.1	108	-0.97	-0.95	+0.02
6	5	55	7.1	97	-1.32	-1.26	+0.06
7	1	9	8.0	90	-1.20	-1.10	+0.10
8	1	9	8.0	90	-2.40	-2.60	-0.20
Totals	--	272	--	--	--	--	--
Average All Children			7.9	102	-1.00	-0.80	+0.20

TABLE 4-9

GRADE EQUIVALENT GAINS AND LOSSES IN RELATION TO EXPECTED GAINS FOR CHILDREN TAKING PRE- AND POST IOWA ACHIEVEMENT TESTS DURING REGULAR SCHOOL YEAR PROJECTS, 1969-70

Assigned Grade	Number of Projects	Number of Pupils in Projects	Mean Months in Project Per Pupil	Mean Hours Treatment Per Pupil	Mean Grade Equivalent From Assigned Grade Norm		Mean Grade Equivalent Gain or Loss Per Pupil in Relation to Expected Gain
					Pre-test	Post test	
1	--	--	--	--	--	--	--
2	--	--	--	--	--	--	--
3	1	5	7.0	120	-0.10	-0.50	-0.40
4	2	19	7.0	127	-1.22	-1.26	-0.04
5	3	22	7.0	123	-1.21	-0.75	+0.46
6	4	28	6.4	254	-1.33	-1.39	-0.06
7	5	62	7.9	153	-2.13	-1.84	+0.29
8	4	59	8.7	159	-2.93	-2.70	+0.23
Totals	--	195	--	--	--	--	--
Average All Children			8.2	163	-2.01	-1.82	+0.19

TABLE 4-10

GRADE EQUIVALENT GAINS AND LOSSES IN RELATION TO EXPECTED GAINS FOR CHILDREN TAKING PRE- AND POST METROPOLITAN ACHIEVEMENT TESTS DURING REGULAR SCHOOL YEAR PROJECTS, 1969-70

Assigned Grade	Number of Projects	Number of Pupils in Projects	Mean Months in Project Per Pupil	Mean Hours Treatment Per Pupil	Mean Grade Equivalent From Assigned Grade Norm		Mean Grade Equivalent Gain or Loss Per Pupil in Relation to Expected Gain
					Pre-test	Post test	
1	--	--	--	--	--	--	--
2	5	41	6.5	192	-0.37	-0.45	-0.08
3	3	23	6.5	47	-0.61	-0.78	-0.17
4	1	6	9.0	48	-1.20	-1.80	-0.60
5	2	27	7.9	47	-1.63	-1.70	-0.07
6	1	10	6.0	44	-2.20	-0.80	+1.40
7	1	7	9.0	48	-2.10	-2.20	-0.10
8	1	12	6.0	44	-2.20	-2.40	-0.20
Totals	--	126	--	--	--	--	--
Average All Children			7.0	94	-1.14	-1.15	-0.01

TABLE 4-11

GRADE EQUIVALENT GAINS AND LOSSES IN RELATION TO EXPECTED GAINS FOR CHILDREN TAKING PRE- AND POST MAC GINITIE ACHIEVEMENT TESTS DURING SUMMER SCHOOL PROJECTS, 1970

Assigned Grade	Number of Projects	Number of Pupils in Projects	Mean Months in Project Per Pupil	Mean Hours Treatment Per Pupil	Mean Grade Equivalent From Assigned Grade Norm		Mean Grade Equivalent Gain or Loss Per Pupil in Relation to Expected Gain
					Pre-test	Post test	
1	5	37	1.2	79	-0.53	-0.51	+0.02
2	8	105	1.1	77	-0.74	-0.64	+0.10
3	6	61	1.1	86	-1.41	-1.09	+0.32
4	5	63	1.0	75	-2.07	-1.65	+0.42
5	3	37	1.0	77	-2.56	-2.39	+0.17
6	3	34	1.0	78	-2.62	-2.34	+0.28
7	3	26	1.0	75	-3.36	-3.04	+0.32
8	2	9	1.0	61	-5.57	-5.04	+0.53
Totals	--	372	--	--	--	--	--
Average All Children			1.1	78	-1.71	-1.48	+0.23

TABLE 4-12

GRADE EQUIVALENT GAINS AND LOSSES IN RELATION TO EXPECTED GAINS FOR CHILDREN TAKING PRE- AND POST STANFORD ACHIEVEMENT TESTS DURING SUMMER SCHOOL PROJECTS, 1970

Assigned Grade	Number of Projects	Number of Pupils in Projects	Mean Months in Project Per Pupil	Mean Hours Treatment Per Pupil	Mean Grade Equivalent From Assigned Grade Norm		Mean Grade Equivalent Gain or Loss Per Pupil in Relation to Expected Gain
					Pre-test	Post test	
1	2	11	1.6	94	+0.01	-0.05	-0.06
2	2	11	1.9	91	+0.15	-0.11	-0.26
3	4	40	1.2	91	-1.35	-1.00	+0.35
4	6	77	1.2	88	-1.42	-1.21	+0.21
5	5	46	1.2	79	-1.55	-1.20	+0.35
6	4	52	1.2	66	-1.73	-1.42	+0.31
7	2	75	1.0	80	-2.13	-1.45	+0.68
8	1	32	1.0	90	-2.38	-1.22	+1.16
Totals	--	344	--	--	--	--	--
Average All Children			1.2	83	-1.63	-1.20	+0.43

TABLE 4-13

GRADE EQUIVALENT GAINS AND LOSSES IN RELATION TO EXPECTED GAINS FOR CHILDREN TAKING PRE- AND POST CALIFORNIA ACHIEVEMENT TESTS DURING SUMMER SCHOOL PROJECTS, 1970

Assigned Grade	Number of Projects	Number of Pupils in Projects	Mean Months in Project Per Pupil	Mean Hours Treatment Per Pupil	Mean Grade Equivalent From Assigned Grade Norm		Mean Grade Equivalent Gain or Loss Per Pupil in Relation to Expected Gain
					Pre-test	Post test	
1	3	30	1.0	82	-0.57	-0.48	+0.09
2	4	38	1.0	85	-1.29	-0.87	+0.42
3	6	54	1.1	84	-1.05	-0.66	+0.39
4	4	37	1.1	97	-1.24	-1.17	+0.07
5	5	30	1.1	95	-1.85	-1.37	+0.48
6	5	29	1.0	85	-2.19	-1.99	+0.20
7	3	14	1.0	82	-2.16	-1.77	+0.39
8	2	3	1.0	84	-2.00	-1.50	+0.50
Totals	--	235	--	--	--	--	--
Average All Children			1.1	87	-1.38	-1.08	+0.30

TABLE 4-14

GRADE EQUIVALENT GAINS AND LOSSES IN RELATION TO EXPECTED GAINS FOR CHILDREN TAKING PRE- AND POST MC GRATH READING TESTS DURING SUMMER SCHOOL PROJECTS, 1970

Assigned Grade	Number of Projects	Number of Pupils in Projects	Mean Months in Project Per Pupil	Mean Hours Treatment Per Pupil	Mean Grade Equivalent From Assigned Grade Norm		Mean Grade Equivalent Gain or Loss Per Pupil in Relation to Expected Gain
					Pre-test	Post test	
1	1	17	1.5	105	-0.90	-0.50	+0.40
2	1	15	1.5	105	-2.20	-1.70	+0.50
3	3	28	1.2	85	-2.22	-2.01	+0.21
4	3	41	1.0	73	-2.12	-1.69	+0.43
5	3	24	1.0	88	-1.99	-1.67	+0.32
6	3	20	1.0	94	-2.82	-1.99	+0.83
7	--	--	--	--	--	--	--
8	--	--	--	--	--	--	--
Totals		145	--	--	--	--	--
Average All Children			1.1	88	-2.08	-1.65	+0.43

TABLE 4-15

GRADE EQUIVALENT GAINS AND LOSSES IN RELATION TO EXPECTED GAINS FOR CHILDREN TAKING PRE- AND POST METROPOLITAN ACHIEVEMENT TESTS DURING SUMMER SCHOOL PROJECTS, 1970

Assigned Grade	Number of Projects	Number of Pupils in Projects	Mean Months in Project Per Pupil	Mean Hours Treatment Per Pupil	Mean Grade Equivalent From Assigned Grade Norm		Mean Grade Equivalent Gain or Loss Per Pupil in Relation to Expected Gain
					Pre-test	Post test	
1	2	15	2.7	109	-0.20	-0.33	-0.13
2	3	26	2.3	109	-0.36	-0.28	+0.08
3	4	36	1.8	112	-0.90	-0.77	+0.13
4	2	7	2.3	90	-0.83	-0.49	+0.34
5	1	4	2.0	90	-1.60	-1.10	+0.50
6	1	10	2.0	90	-2.20	-0.90	+1.30
7	--	--	--	--	--	--	--
8	--	--	--	--	--	--	--
Totals	--	98	--	--	--	--	--
Average All Children			2.1	106	-0.78	-0.58	+0.20